



FACTORS AFFECTING TEACHERS PERCEPTION OF E-LEARNING: A REVIEW OF THE LITERATURE

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ABSTRACT: The growing interest in E-learning seems to be coming from different directions like corporate and educational sectors. Corporate sees E-learning as a tool to save cost in terms of training and travelling to the learning centre (Bassi.2010), as from the educational point of view, it is an additional access to improving the teaching and learning process and to enhance a better communication between the teachers and learners. This article reviews personal, institutional, technological and other factors that affect teachers' perception of E-Learning, since we know that teachers' perceptions have an impact on their teaching practices. The article concludes there are numerous factors that influence teachers' perceptions of E-Learning. Teachers' feelings, knowledge and attitudes influence their use of e-learning in teaching. Finally, factors (barriers) that discourage the use of e-learning by teachers were also reviewed in this article.

KEYWORDS- Perception, E-Learning; Personal, institutional and technological factors.

I. INTRODUCTION

In the present time, there is very easy to access information with technology so as to facilitate students with the right approach of managing abundant information to their optimum benefit and in taking right decisions, in this technologically complex world the teacher here takes on the role of facilitator and guide. Teacher's role in the tech-savvy society becomes very essential as they make students learn how to evaluate the abundant information available critically, to identify facts from propaganda, to understand the real ethical, legal and moral issues with respect to the access and use of information and to create meaning from data. These things make students capable of solving the real world current problems and prepare for a future of unknowns. New methods of teaching and learning have begun to emerge globally and the most important in this is E-Learning, which is promoting this shift from teacher-centered to student-centered learning. According to National Curriculum Framework on Teacher Education 2010, *"With the onset and proliferation of Information and Communication Technology (ICT), there is a growing demand that it be included in school education. It has become more of a fashion statement to have computers or multimedia in schools, the result being that in spite of its potential to make learning liberating; its implementation is often not more than cosmetic. It is also often touted as a panacea for shortage of teachers. These are detrimental to the learning of the child. Teacher education needs to orient and sensitize the teacher to distinguish between critically useful, developmentally appropriate and the detrimental use of ICT. In a way, ICT can be imaginatively drawn upon for professional development and academic support of the pre-service and in-service teachers."* Thus to build the critical thinking ability of the learners in the choice of information available by electronic medium teachers need to build its own capacity on E-learning, since technology has become a part and parcel of lives of individuals, it becomes important for the teachers to be comfortable in its handling in education system as well. The teachers need to utilize E-Learning in the instructional materials as per individual differences.

II. MEANING OF E-LEARNING:

E-learning refers to the use of information and communication technologies to enable the access to online learning/teaching resources. Abbad et al (2009) in its broadest sense defined E-learning to mean any learning that is enabled electronically. However they narrowed this definition down to mean learning that is empowered by the use of digital technologies. This definition is further narrowed by some researchers as any learning that is internet-enabled or web-based (LaRose et al, 1998; Keller and Cernerud, 2002). According to Liu and Wang (2009) the features of e-learning process are chiefly centered on the internet; global sharing and learning resources; information broadcasts and knowledge flow by way of network courses, and lastly flexibility of learning as computer-generated environment for learning is created to overcome issues of distance and time. They further claims that the progression of communications technologies, particularly the internet, did transform distance learning into e-learning. The term 'e-learning' is applied in different perspectives, including distributed learning, online-distance learning, as well as hybrid learning (Maltz et al 2005).

TABLE: E-LEARNING DEFINITIONS

Concept	Citation	What	Why	How
E-learning	[38] [39]	From basic use of ICT to advanced applications and adoption	Supporting and managing learning Enhancing and/or supporting	Information communication and technology as a communications and delivery tool
Virtual learning environment	[40]	A wide range of resources	Computer-based environments allowing interactions and encounters with other participants	
Blended learning	[41]	An effective and low risk strategy	Integration of text based asynchronous Internet technology with face-to-face learning.	
Networked learning	[42]	Adding computer mediated environment to "campus-based" course and running a new "hybrid distance learning" course	Promoting connections between one learner and other learners; between learners and tutors; and between a learning community and its learning resources	Using Information communication and technology

III. TEACHERS PERCEPTION OF E-LEARNING:

According to Dr. Shirley Telles, Shreevidya Nagesh and Naveen K. V. Shirley Telles, Ph.D., the word 'perception', known by Sanskrit terms as, 'pratyakna' and 'aparokna', where 'pratyakna' denotes a 'pramana' and leads to direct and valid knowledge, exists from Vedic age. In many of our ancient texts like the Vedas, Upanishads, Bhagavad Gita, Patanjali and many schools of yoga, perception is one of the methods of knowledge from sensory experience, which man shares with the lowest living beings, up to the transcendental perception of ultimate reality claimed by great mystics and seers of the world. Perceptions also refer to someone's feelings of like or dislike, favorable or unfavorable, toward an item. It includes also the positive, negative, and neutral points of view toward something, an object (Allen, L., 1983). According to D. Scott & Baydon "Perception is a selective process as eye is capable of sensing much more data than the brain is capable of processing. Six factors which enhance selectivity are background, intensity, extensity, concreteness, contrast, velocity and impressively." Every teacher has their perception of implementing e-learning. Perceptions are to spark off similar behavior (Bargh et al. 1996). Perception is the thought about something that has been done, and it can be expressed by attitude. Teachers' perceptions form a significant component to describe the environment of the learning process (Lee & Tsai, 2005). It means that the role of teachers' perception can give influence to the student's behavior. A primary reason for teachers' perception study is that a learner's behaviors known as a result of his/her beliefs (Ajzen & Fishbein, 1980; Cooney, 2001). According to Wilson and Cooney, "Teachers' perception will be part of learning evaluation to get successful learning". Dooley & Murphy (2001) define the Faculty Perceptions of E-Learning as "The opinions, attitudes and beliefs held and exhibited by faculty members in relation to the regular use of e-learning resources."

IV. FACTORS AFFECTING TEACHERS PERCEPTION OF E-LEARNING:

Several factors affecting Teachers Perception of E-Learning have been identified by researchers. Mahdizadeh, H et al. (2008) while determining factors of the use of e-learning environments by university teachers be able to extract different factors like Knowledge Construction, Teaching and Learning Approach, Teachers' Opinion about Computer-Assisted Learning, Teachers' Opinion about Web-based Activities, Ease of Use (perceived difficulty), and time which might contribute to the explanation of teachers' actual use of e-learning environments (USE). Development of infrastructure, administration commitment, funding, culture, capacity of teachers, and system security were emerged as factors that effected implementation or contributed to better implementation of e-learning (Alshammari, 2012). Schiller (2003) stated that Personal characteristics such as educational level, age, gender, educational experience, experience with the computer for educational purpose and attitude towards computers can influence the adoption of a technology. Teo (2008) conducted a survey on pre-service teachers' attitudes towards computer use in Singapore. A sample of 139 pre-service teachers was assessed for their computer attitudes using questionnaire with four factors: affect (liking), perceived usefulness, perceived control, and behavioral intention to use the computer. He found that teachers were more positive about their attitude towards computers and intention to use computer than their perceptions of the usefulness of the computer and their control of the computer. Peralta & Costa (2007) stated about ICT competence that teachers with more experience with computers have greater confidence in their ability to use them effectively. Gender differences and the use of ICT had also been reported in several studies. Other factors such as support, funding, training and facilities influence teachers' adoption and integration of technologies into their classrooms. Teachers' professional development was also a key factor to successful integration of computers into teaching. Lack of teacher ICT skills; lack of teacher confidence; lack of pedagogical teacher training; lack of follow-up of new and lack of differentiated training programmes were those factors (barriers) that discourage the use of ICT by teachers. Renzi (2008) stated that different beliefs about the value of e-learning encourage teachers to apply e-learning technology on different levels. Teacher's personality was a powerful intrinsic motivational factor which influences e-learning technology acceptance. The most commonly studied teacher's features were: self-efficacy and anxiety, more often approached from the technical aspect. Computer anxiety is closely connected to the teacher's attitude; author suggests the possibility of understanding computer self-efficacy as a construct of perceived ease of use (Timothy, 2009). Osika et al. (2009) revealed that student characteristics can act as motivators for application and development of e-learning in teaching, and student capabilities. Gautreau (2011) by showing the importance of acquiring knowledge and skill confirms the importance of teacher's personal motivation to attend the course about applying e-learning in education process, which strongly influences the successful integration of e-learning system in education process. Apart

from all this Institutional factors like capacity and reliability of ICT infrastructure, institutional e-strategy, teacher academic time and freedom etc belong to a group of extrinsic motivational factors influencing academic teacher's acceptance of e-learning technology.

Badia A. et al.(2013) while conducted study on Factors Affecting School Teachers' Perceptions Of The Instructional Benefits Of Digital Technology found that socio demographics (i.e., gender and teaching area) and ICT related teacher conditions concerning digital skills (i.e., digital literacy level and educational ICT training) and frequency of Internet access (i.e., inside and outside school internet use) had shown the strongest correlations with teachers' perceived effectiveness of digital technology. However school characteristics show no significant difference. Finally, ICT related school conditions like ICT teaching policy and ICT infrastructure show a significant and more modest association with teachers' perceived effectiveness of digital technology. Albasna, K. (2016) discovered that there were many key factors which influence the use and implement E-Learning. These were teachers' characteristics, students' characteristics, technology and design and content. According to age, gender, Field of teaching, years of teaching and years of using E-learning there were some differences in perceptions between teachers. But no statistically significant differences were found among the teachers who had an Internet access and a computer access at home and who had not with regard to the students' characteristics, teachers' characteristics, technology and design and content factors. Lack of computer literacy, training and awareness campaigns, poor motivation of the product by the implementing team and negative perceptions of the program by staff and students were the factors amongst students which negative influence the implementation of e-learning. Poor accessibility to the e-learning platform caused by inadequate ICT infrastructure, lack of properly formulated e-learning policy to guide the implementation program and lack of adequate support by management were those factors that influence negative e-learning implementation from the perspective of the university's lecturing staff(Patel, et al., 2017) .

Alsuwailam, R. (2018) while investigating on factors affecting faculty's intent to use (ITU) e-learning systems at a university in the Kingdom of Saudi Arabia (KSA) found that faculty members' ITU the e-learning system at King Faisal University (KFU) was mainly influenced by their previous teaching experience with an e-learning system, the ability to change the user password in the e-learning system, and the PU (Perceived Usefulness), of the e-learning system. Hadullo, K et al. (2018) concluded that course design, content support, course support, social support, administrative support, learner characteristics, instructor characteristics and technician characteristics were the key factors that influence the quality of asynchronous e-learning systems in developing countries while conducting study on Factors affecting asynchronous e-learning quality in developing countries. According to Solangi, Z. et al. (2018) gender positively influence moderating role between training and PU (Perceived Usefulness), influence moderating role between self-efficacy and PEU(Perceived ease of Use), influence moderating role between compatibility and PEU and positively influence moderating role between facilitating conditions and PEU in the successful Implementation of eLearning. Zalah, I. (2018) discovered that performance and effort expectancy, attitudes, and education policy were the factors which had positive effects on teachers 'intention to incorporate e-learning technologies and that anxiety had a significant negative effect. Behavioral intentions, facilitating conditions and teachers' educational experience also had positive effects on the actual use of e-learning technologies.

V. RESULTS AND DISCUSSION:

The review has highlighted on factors that positively or negatively influence teachers' perceptions of E-Learning. There are personal, institutional and technological factors and research has revealed that these factors are related to each other. On a personal level, there are numerous factors that influence teachers' perceptions of E-Learning. Teachers' feelings, knowledge and attitudes influence their use of e-learning in teaching. According to Huang & Liaw (2005) teachers attitudes towards technology influence their acceptance of the usefulness of technology and its integration into teaching. If teachers' attitudes are positive toward the use of educational technology then they can easily provide useful insight about the adoption and integration of E-Learning into teaching and learning processes. On the institutional and management level, factors such as support, funding, training and facilities influence teachers' adoption and integration of technologies into their classrooms.

On the technological level, for successful adoption and integration of e-learning into teaching, teachers must perceive the technology as better than previous practice; teachers' opinion about Computer-Assisted Learning, Teachers' Opinion about Web-based Activities, consistent with their existing values, past experiences and needs; ease to use, can be experimented with on a limited basis before making a decision to adopt and finally the results of the innovation are visible to others. Many teachers are not interested to change an existing program to something they only know through discussion and reading and not through observation. The key factor in the studies is teachers' attitudes toward technology or intentions to use technology in their classrooms. Teachers' professional development was also a key factor to successful integration of e-learning into teaching. Teacher's personal motivation to attend the course about applying e-learning in education process, which strongly influences the successful integration of e-learning system in education process but if teachers have negative attitudes toward technology, providing them with excellent e-learning facilities may not influence them to use it in their teaching. Therefore, teachers need to be assured that e-learning can make their teaching interesting, easier, more fun for them and students, more motivating and more enjoyable.

Finally, factors (barriers) that discourage the use of e-learning by teachers were also reviewed. These factors categorized are into teacher-level, institutional-level and system-level barriers. Teacher-level barriers include lack of teacher ICT skills; lack of teacher confidence; lack of pedagogical teacher training; lack of follow-up of new and lack of differentiated training programmes. The institutional level barriers comprise absence of e-learning infrastructure; old or poorly maintained hardware; lack of suitable educational software; limited access to e-learning; limited project-related experience; lack of e-learning mainstreaming into institutional strategy and the system-level barriers include rigid structure of traditional education systems; traditional assessment; restrictive curricula and restricted organizational structure. Knowing the extent to which these barriers affect individuals and institutions may help in taking a decision on how to tackle them (Becta, 2004).

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